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United States Department of Agriculture,

DIVISION OF BOTANY.

YAMS IN THE WEST INDIES.

In January, 1899, collections of yams (*Dioscorea* spp.) were imported by the United States Department of Agriculture from Jamaica and Barbados, British West Indies, for distribution mainly in Florida, where they have been tried by a number of experimenters during the past season. Several varieties of yams are already cultivated in the South, but not so many nor so good as those grown in the West Indies.

JAMAICA YAMS.

The cultivation of the yam in Jamaica dates from a remote period. No one seems to know the derivation of the plant, whether it was imported, or whether it was a native of the island. Its cultivation has increased very markedly during the last ten years, being estimated by some to have doubled during that time. In the eastern portion of the island more land is devoted to this crop than to any other except the banana, which to-day forms the principal fruit export of the island. The yam is one of the most important articles of exchange in the markets among the black population, and it would be no exaggeration to say that it is the staple food plant of the Jamaica blacks, as well as a very important vegetable. The cultivation of this crop is not, as might be supposed, confined to the negroes, but is given serious attention by some of the most intelligent planters in Jamaica. It is especially adapted to the higher portions of the island. Many of the coffee planters grow it for their own use, and for sale to the less thrifty negroes. The profits from its cultivation are not great, but are reasonably remunerative. The consular reports do not show that there is any commercial importation of yams into the United States, but a market could undoubtedly be created for the best varieties, as it is a vegetable of sufficiently characteristic flavor to win a place for itself on the best hotel tables. The variety which is superior to all others is the "yampie." This is worthy of serious consideration by the Florida truck farmers and by the Louisiana planters, as a vegetable to be grown for the highest-priced or fancy markets. A baked yampie is more palatable than a baked potato, and the crisp skin has a flavor different from that of any other vegetable with which I am acquainted.

The cultivation of this plant is not as simple as might be supposed, and the treatment varies with the different varieties.

The yampie vine somewhat resembles our American species of smilax, with clusters of large, fleshy roots, like sweet potatoes. The plants are propagated by means of the so-called "heads," consisting of groups or clusters of short roots just below the crown. These heads are planted in hills, six to eight feet apart each way, three heads being placed six to eight inches apart in each hill. As soon as the vines are out of the ground, a stout stake or pole, seven or eight feet long, is driven into the hill, near one of the heads, and the various vines are trained up to it. If planted in rich soil they grow without attention other than the cultivation necessary to keep down weeds. Several vines spring from each single head, from which they at first draw their nourishment, sucking it as dry as a sponge. By the time the vines are established on their own roots they commence to form, underneath the heads, the fleshy roots which become the next crop. In the course of five or six months after planting, these roots are large enough to harvest and are gathered without destroying the vines, sometimes three or more crops being taken from one planting. After harvesting the deeply buried, fleshy tubers, the upper roots are allowed to grow and make heads, and these are again used to start a new plantation, being cut into large pieces, each containing several buds. If not wanted for immediate planting, they are buried in a pit and covered with straw and leaves until the buds start, when they are set out in hills, as just described. Several of the edible roots are produced from each head, but the proportionate increase is small compared with sweet potatoes. The yield is not more than three or four roots per head planted. It is the custom in Jamaica to plant large heads since it is considered that these, or at least large cuttings of the roots, give better yields than small ones. In Jamaica the yam is never sprouted like the sweet potato. It is considered that the plant is dependent for too long a time on the nutriment stored in the head to make such a practice possible. The sprouts are much more feeble than those from the sweet potato.

The "negro yam," known also as the "Lucy" or "blue vine," has the reputation of being the earliest of the Jamaica yams. If planted as late as April it matures its crop in October. The white yam requires a longer time to mature, but it is a much better keeper. The tubers can be kept for months, provided they are not bruised or cut. To preserve them the bruised surfaces are painted with a mixture of quicklime and water.

The "affoo," or yellow yam, is extensively grown, but is considered no better than the white, and is inferior in keeping qualities.

The most successful yam plantations in Jamaica are in the cooler, moist regions of the island. The plant requires a great deal of moisture. Should an attempt be made to grow these yams in the United States it would probably not be worth while to try them in any region where there is less than fifty inches of rainfall a year. However, the plants, when once well rooted, are able to endure comparatively long periods of dry, hot weather, but it is a question whether such periods of drought do not interfere with the yield. The heads ought to be planted as soon as danger from frost is past in spring. They could be set out advantageously in a cold frame in February and sprouted for two months. The heads should be well covered when set out in the hill, and the earth drawn up well around the base of the vine, the cultivation being similar in this regard to that of sweet potatoes. In order to retain enough heads for planting the following season, the crop should be removed without disturbing the base of the vine any more than is necessary. The irregular collection of root tips near the surface, which form the incipient heads, should be covered up after the removal of the tubers and allowed to remain as long as possible before digging.



FIG. 1.—Barbados yams grown in Florida.

BARBADOS YAMS.

The Barbados yams are evidently of a species entirely different from the Jamaica varieties. In the first place they are not cultivated upon poles, but are grown precisely like sweet potatoes, in rows three to six feet apart, at an equal distance from each other in the row. Hundreds of acres are given up to the cultivation of yams all over the island. It is one of the most important food plants. Some

of the varieties such as the Crop or Hunt would undoubtedly meet with popular favor in the New York markets. Many of the other varieties will prove of value only for plantation hands. The yield in most varieties is only one or two large roots per plant. The usual method of planting is to cut the roots into small pieces, each containing a few eyes or buds. These are dropped in hills, just as Irish potatoes are planted. It might be desirable to start them under cold frames and transplant as in the case of sweet potatoes.

CONCLUSIONS.

The West Indian yam is not a crop that will supplant the sweet potato, but the different varieties will form a welcome addition to sub-tropical agriculture in the United States and in the new insular dependencies. The finer varieties, possessing as they do a characteristic flavor, will undoubtedly fill an important place in the northern markets.

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Approved:

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